

FEEDYARD COMPOSTING

Works! 2006

March 28, 2006
Great Bend, KS

Jas Dale

Composting

- Composting raw manure
- Composting raw manure for mortality composting
- Value added product by screening compost
- Marketing

Adding Moisture

- Lagoon water
- Fresh water
- A dry windrow is 20% moisture
- By adding moisture, windrow moisture is increased to 40% with only one pass of compost turner



Adding Moisture

- Spraying water on windrow
- Injecting water on windrow with a blade
- Injecting water with compost turner
 - *Nozzle spacing that fits the size of the windrow
 - *Variable rate of water flow to match the moisture in the windrow

Posting of Animals

- Maximize windrow space with proper animal placement
- Necropsy
- Amputate legs above the knee
- Cut all four stomachs
- Leave carcass open for maximum decomposition



Raw vs Mortality Mix

- Chunky material is:
either very dry or very wet
- It has no oxygen
VS.
- Sized Material that is:
- Smaller particles
- Temperature is 135°-150°
- 40-60 % moisture
- Actively hot



Staggering the Pre-Mortality Mix

- Active Hot Row
- 135°-150° Degree
- Far left a truck is bringing in raw manure
- Center rows are active hot
- Right row, is two weeks behind in the process



Bottom Pad Height

- Pre-mortality mix
- 24 to 30 inches tall
- Non compacted
- Laid out only as needed to bury animals



Burying Mortalities

- Pre-mortality mix
- Windrow needs to be six feet high
- Animal is buried by 12 yards of pre-mortality mix



Temperature of Mortality

- Mortality has been decomposing for 100 days
- Windrow is still 130° after 100 days
- This is before the composting machine has turned the windrow
- Add moisture if needed to the windrow



Finishing Mortality Rows

- Finish turning until temperature is under 100°
- There is no set time or number of turns the windrow needs until compost is finished!!!



Poor Spacing of Windrows

- (@#**&#@!!!***\$\$)
- Short term=saves space
- Long term=grey hair
- Having to disturb row to move it over
- Needs to be twelve feet at the base
- Too narrow, it is hard on equipment
- Too wide, it is wasted space



Foreign Materials

- Twine
- Concrete
- Batteries
- Used iron
- Medical supplies
- Tires and rims
- Small block Chevy's



Compost Screening

- Value added
- Uniform particle sizes for better agronomic uptake
- Non-evasive to farm machinery
- Screens out foreign material such as concrete, metal, wood posts, mortality bones, etc.



Compost Application



Compost vs. Fertilizer

- Compost is a balanced soil amendment
- A ton of compost has nitrogen, major and secondary nutrients, and micro nutrients for a balanced blend for agronomic use
- Commercial fertilizer has to be bought on a per-ingredient blend

Established and Emerging Composting Markets

- Ease of application
- Production crops: corn, alfalfa, sunflowers, wheat, and cotton
- Strip till farming
- High energy costs
- High input costs
- Inconsistency of mortality rendering industry

BBQ at My Place

